

# LXY Series

- Adoption of innovative electrolyte and new technologies
- Endurance with ripple current : 2,000 to 8,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

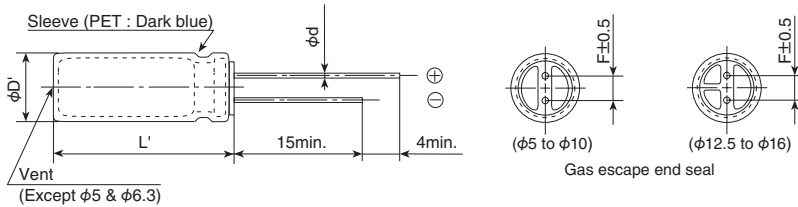


## SPECIFICATIONS

| Items  | Characteristics   |  |
|--|---|--|
| Category   | -55 to +105°C   |  |
| Temperature Range                                      |   |  |
| Rated Voltage Range                                    | 10 to 63V <sub>dc</sub>   |  |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)   |  |
| Leakage Current  | I=0.01CV or 3μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)   |  |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>dc</sub> )  | 10V 16V 25V 35V 50V 63V  |
|  | tan δ (Max.)  | 0.19 0.16 0.14 0.12 0.10 0.10  |
|  | When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)   |  |
| Low Temperature Characteristics (Max. Impedance Ratio) | Z(-55°C)/Z(+20°C)   | 10 to 50V <sub>dc</sub> : 3max.<br>63V <sub>dc</sub> : 6max. (at 120Hz)                              |
|  |   |  |
| Endurance  | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at 105°C.                        |  |
|  | Time  | φ 5 & 6.3 : 2,000hours φ 8 : 3,000hours φ 10 : 5,000hours φ 12.5 : 7,000hours φ 16 & 18 : 8,000hours |
|  | Capacitance change  | ≤ ±20% of the initial value  |
|  | D.F. (tan δ)  | ≤200% of the initial specified value   |
|  | Leakage current   | ≤The initial specified value   |
| Shelf Life   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |  |
|  | Capacitance change  | ≤ ±20% of the initial value  |
|  | D.F. (tan δ)  | ≤200% of the initial specified value   |
|  | Leakage current   | ≤The initial specified value   |

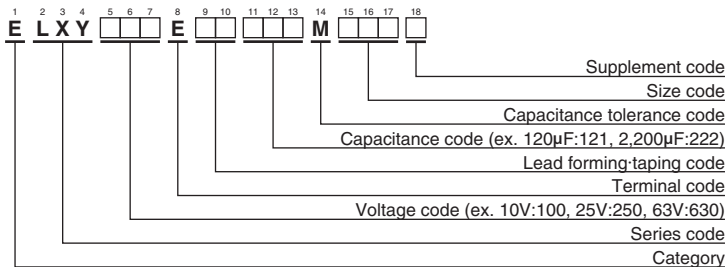
## DIMENSIONS [mm]

- Terminal Code : E



| φD  | 5          | 6.3 | 8   | 10  | 12.5 | 16  |
|-----|------------|-----|-----|-----|------|-----|
| φd  | 0.5        | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 |
| F   | 2.0        | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 |
| φD' | φD+0.5max. |     |     |     |      |     |
| L'  | L+1.5max.  |     |     |     |      |     |

## PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

## RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) |      |      |      |
|-----------------|---------------|------|------|------|
|                 | 120           | 1k   | 10k  | 100k |
| 10 to 180       | 0.40          | 0.75 | 0.90 | 1.00 |
| 220 to 560      | 0.50          | 0.85 | 0.94 | 1.00 |
| 680 to 1,800    | 0.60          | 0.87 | 0.95 | 1.00 |
| 2,200 to 3,900  | 0.75          | 0.90 | 0.95 | 1.00 |
| 4,700 to 8,200  | 0.85          | 0.95 | 0.98 | 1.00 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

### ◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./100kHz) |       | Rated ripple current (mA rms/105°C, 100kHz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./100kHz) |                    | Rated ripple current (mA rms/105°C, 100kHz) | Part No.           |
|-----------------------|----------|--------------------|---------------------------|-------|---|--------------------|-----------------------|----------|--------------------|---------------------------|--------------------|---|--------------------|
|                       |          |                    | 20°C                      | -10°C |   |                    |                       |          |                    | 20°C                      | -10°C              |   |                    |
| 10                    | 82       | 5×11.5             | 0.75                      | 1.5   | 163   | ELXY100E□□820MEB5D | 35                    | 27       | 5×11.5             | 0.75                      | 1.5                | 163   | ELXY350E□□270MEB5D |
|                       | 180      | 6.3×11.5           | 0.35                      | 0.70  | 273   | ELXY100E□□181MFB5D |                       | 56       | 6.3×11.5           | 0.35                      | 0.70               | 273   | ELXY350E□□560MFB5D |
|                       | 220      | 6.3×15             | 0.25                      | 0.50  | 390   | ELXY100E□□221MF15D |                       | 82       | 6.3×15             | 0.25                      | 0.50               | 390   | ELXY350E□□820MF15D |
|                       | 330      | 8×12               | 0.17                      | 0.34  | 445   | ELXY100E□□331MH12D |                       | 120      | 8×12               | 0.17                      | 0.34               | 445   | ELXY350E□□121MH12D |
|                       | 390      | 10×12.5            | 0.12                      | 0.24  | 625   | ELXY100E□□391MJC5S |                       | 120      | 10×12.5            | 0.12                      | 0.24               | 625   | ELXY350E□□121MJC5S |
|                       | 470      | 8×15               | 0.13                      | 0.26  | 555   | ELXY100E□□471MH15D |                       | 180      | 8×15               | 0.13                      | 0.26               | 555   | ELXY350E□□181MH15D |
|                       | 680      | 8×20               | 0.095                     | 0.19  | 740   | ELXY100E□□681MH20D |                       | 220      | 8×20               | 0.095                     | 0.19               | 740   | ELXY350E□□221MH20D |
|                       | 680      | 10×16              | 0.084                     | 0.17  | 825   | ELXY100E□□681MJ16S |                       | 220      | 10×16              | 0.084                     | 0.17               | 825   | ELXY350E□□221MJ16S |
|                       | 1,000    | 10×20              | 0.062                     | 0.13  | 1,040                                       | ELXY100E□□102MJ20S |                       | 330      | 10×20              | 0.062                     | 0.13               | 1,040                                       | ELXY350E□□331MJ20S |
|                       | 1,200    | 10×25              | 0.052                     | 0.11  | 1,260                                       | ELXY100E□□122MJ25S |                       | 390      | 10×25              | 0.052                     | 0.11               | 1,260                                       | ELXY350E□□391MJ25S |
|                       | 1,500    | 10×30              | 0.044                     | 0.088 | 1,440                                       | ELXY100E□□152MJ30S |                       | 560      | 10×30              | 0.044                     | 0.088              | 1,440                                       | ELXY350E□□561MJ30S |
|                       | 1,800    | 12.5×20            | 0.046                     | 0.092 | 1,340                                       | ELXY100E□□181MK20S |                       | 560      | 12.5×20            | 0.046                     | 0.092              | 1,340                                       | ELXY350E□□561MK20S |
|                       | 2,200    | 12.5×25            | 0.034                     | 0.068 | 1,690                                       | ELXY100E□□222MK25S |                       | 680      | 12.5×25            | 0.034                     | 0.068              | 1,690                                       | ELXY350E□□681MK25S |
|                       | 2,700    | 12.5×30            | 0.030                     | 0.060 | 1,950                                       | ELXY100E□□272MK30S |                       | 1,000    | 12.5×30            | 0.030                     | 0.060              | 1,950                                       | ELXY350E□□102MK30S |
|                       | 3,300    | 12.5×35            | 0.024                     | 0.048 | 2,220                                       | ELXY100E□□332MK35S |                       | 1,000    | 16×20              | 0.038                     | 0.076              | 1,630                                       | ELXY350E□□102ML20S |
|                       | 3,300    | 16×20              | 0.038                     | 0.076 | 1,630                                       | ELXY100E□□332ML20S |                       | 1,200    | 12.5×35            | 0.024                     | 0.048              | 2,220                                       | ELXY350E□□122MK35S |
|                       | 3,900    | 12.5×40            | 0.022                     | 0.044 | 2,390                                       | ELXY100E□□392MK40S |                       | 1,200    | 16×25              | 0.028                     | 0.056              | 2,070                                       | ELXY350E□□122ML25S |
|                       | 3,900    | 16×25              | 0.028                     | 0.056 | 2,070                                       | ELXY100E□□392ML25S |                       | 1,500    | 12.5×40            | 0.022                     | 0.044              | 2,390                                       | ELXY350E□□152MK40S |
| 5,600                 | 16×30    | 0.025              | 0.050                     | 2,350 | ELXY100E□□562ML30S                          | 1,800              | 16×30                 | 0.025    | 0.050              | 2,350                     | ELXY350E□□182ML30S |   |                    |
| 6,800                 | 16×35    | 0.022              | 0.044                     | 2,550 | ELXY100E□□682ML35S                          | 2,200              | 16×35                 | 0.022    | 0.044              | 2,550                     | ELXY350E□□222ML35S |   |                    |
| 8,200                 | 16×40    | 0.018              | 0.036                     | 2,900 | ELXY100E□□822ML40S                          | 2,700              | 16×40                 | 0.018    | 0.036              | 2,900                     | ELXY350E□□272ML40S |   |                    |
| 16                    | 56       | 5×11.5             | 0.75                      | 1.5   | 163   | ELXY160E□□560MEB5D | 50                    | 18       | 5×11.5             | 1.2                       | 2.4                | 129   | ELXY500E□□180MEB5D |
|                       | 120      | 6.3×11.5           | 0.35                      | 0.70  | 273   | ELXY160E□□121MFB5D |                       | 39       | 6.3×11.5           | 0.54                      | 1.1                | 219   | ELXY500E□□390MFB5D |
|                       | 180      | 6.3×15             | 0.25                      | 0.50  | 390   | ELXY160E□□181MF15D |                       | 56       | 6.3×15             | 0.34                      | 0.68               | 310   | ELXY500E□□560MF15D |
|                       | 270      | 8×12               | 0.17                      | 0.34  | 445   | ELXY160E□□271MH12D |                       | 68       | 8×12               | 0.30                      | 0.60               | 340   | ELXY500E□□680MH12D |
|                       | 270      | 10×12.5            | 0.12                      | 0.24  | 625   | ELXY160E□□271MJC5S |                       | 82       | 8×15               | 0.20                      | 0.40               | 470   | ELXY500E□□820MH15D |
|                       | 330      | 8×15               | 0.13                      | 0.26  | 555   | ELXY160E□□331MH15D |                       | 82       | 10×12.5            | 0.20                      | 0.40               | 480   | ELXY500E□□820MJC5S |
|                       | 470      | 8×20               | 0.095                     | 0.19  | 740   | ELXY160E□□471MH20D |                       | 120      | 8×20               | 0.14                      | 0.28               | 610   | ELXY500E□□121MH20D |
|                       | 470      | 10×16              | 0.084                     | 0.17  | 825   | ELXY160E□□471MJ16S |                       | 120      | 10×16              | 0.13                      | 0.26               | 755   | ELXY500E□□121MJ16S |
|                       | 680      | 10×20              | 0.062                     | 0.13  | 1,040                                       | ELXY160E□□681MJ20S |                       | 180      | 10×20              | 0.088                     | 0.18               | 945   | ELXY500E□□181MJ20S |
|                       | 820      | 10×25              | 0.052                     | 0.11  | 1,260                                       | ELXY160E□□821MJ25S |                       | 220      | 10×25              | 0.073                     | 0.15               | 1,150                                       | ELXY500E□□221MJ25S |
|                       | 1,200    | 10×30              | 0.044                     | 0.088 | 1,440                                       | ELXY160E□□122MJ30S |                       | 330      | 10×30              | 0.054                     | 0.11               | 1,260                                       | ELXY500E□□331MJ30S |
|                       | 1,200    | 12.5×20            | 0.046                     | 0.092 | 1,340                                       | ELXY160E□□122MK20S |                       | 330      | 12.5×20            | 0.059                     | 0.12               | 1,190                                       | ELXY500E□□331MK20S |
|                       | 1,500    | 12.5×25            | 0.034                     | 0.068 | 1,690                                       | ELXY160E□□152MK25S |                       | 470      | 12.5×25            | 0.044                     | 0.088              | 1,490                                       | ELXY500E□□471MK25S |
|                       | 2,200    | 12.5×30            | 0.030                     | 0.060 | 1,950                                       | ELXY160E□□222MK30S |                       | 560      | 12.5×30            | 0.039                     | 0.078              | 1,720                                       | ELXY500E□□561MK30S |
|                       | 2,200    | 16×20              | 0.038                     | 0.076 | 1,630                                       | ELXY160E□□222ML20S |                       | 680      | 12.5×35            | 0.033                     | 0.066              | 1,890                                       | ELXY500E□□681MK35S |
|                       | 2,700    | 12.5×35            | 0.024                     | 0.048 | 2,220                                       | ELXY160E□□272MK35S |                       | 680      | 16×20              | 0.050                     | 0.10               | 1,420                                       | ELXY500E□□681ML20S |
|                       | 2,700    | 16×25              | 0.028                     | 0.056 | 2,070                                       | ELXY160E□□272ML25S |                       | 820      | 12.5×40            | 0.029                     | 0.058              | 2,030                                       | ELXY500E□□821MK40S |
|                       | 3,300    | 12.5×40            | 0.022                     | 0.044 | 2,390                                       | ELXY160E□□332MK40S |                       | 820      | 16×25              | 0.034                     | 0.068              | 1,880                                       | ELXY500E□□821ML25S |
| 3,900                 | 16×30    | 0.025              | 0.050                     | 2,350 | ELXY160E□□392ML30S                          | 1,000              | 16×30                 | 0.030    | 0.060              | 2,150                     | ELXY500E□□102ML30S |   |                    |
| 4,700                 | 16×35    | 0.022              | 0.044                     | 2,550 | ELXY160E□□472ML35S                          | 1,200              | 16×35                 | 0.027    | 0.054              | 2,320                     | ELXY500E□□122ML35S |   |                    |
| 5,600                 | 16×40    | 0.018              | 0.036                     | 2,900 | ELXY160E□□562ML40S                          | 1,500              | 16×40                 | 0.024    | 0.048              | 2,540                     | ELXY500E□□152ML40S |   |                    |
| 25                    | 39       | 5×11.5             | 0.75                      | 1.5   | 163   | ELXY250E□□390MEB5D | 63                    | 10       | 5×11.5             | 1.9                       | 4.8                | 103   | ELXY630E□□100MEB5D |
|                       | 82       | 6.3×11.5           | 0.35                      | 0.70  | 273   | ELXY250E□□820MFB5D |                       | 18       | 6.3×11.5           | 1.0                       | 2.5                | 161   | ELXY630E□□180MFB5D |
|                       | 120      | 6.3×15             | 0.25                      | 0.50  | 390   | ELXY250E□□121MF15D |                       | 33       | 6.3×15             | 0.61                      | 1.6                | 233   | ELXY630E□□330MF15D |
|                       | 150      | 8×12               | 0.17                      | 0.34  | 445   | ELXY250E□□151MH12D |                       | 47       | 8×12               | 0.47                      | 1.2                | 274   | ELXY630E□□470MH12D |
|                       | 180      | 10×12.5            | 0.12                      | 0.24  | 625   | ELXY250E□□181MJC5S |                       | 56       | 10×12.5            | 0.27                      | 0.68               | 418   | ELXY630E□□560MJC5S |
|                       | 220      | 8×15               | 0.13                      | 0.26  | 555   | ELXY250E□□221MH15D |                       | 68       | 8×15               | 0.34                      | 0.85               | 360   | ELXY630E□□680MH15D |
|                       | 330      | 8×20               | 0.095                     | 0.19  | 740   | ELXY250E□□331MH20D |                       | 68       | 10×16              | 0.21                      | 0.53               | 525   | ELXY630E□□680MJ16S |
|                       | 330      | 10×16              | 0.084                     | 0.17  | 825   | ELXY250E□□331MJ16S |                       | 82       | 8×20               | 0.21                      | 0.53               | 500   | ELXY630E□□820MH20D |
|                       | 470      | 10×20              | 0.062                     | 0.13  | 1,040                                       | ELXY250E□□471MJ20S |                       | 120      | 10×20              | 0.16                      | 0.40               | 650   | ELXY630E□□121MJ20S |
|                       | 560      | 10×25              | 0.052                     | 0.11  | 1,260                                       | ELXY250E□□561MJ25S |                       | 150      | 10×25              | 0.13                      | 0.33               | 783   | ELXY630E□□151MJ25S |
|                       | 820      | 10×30              | 0.044                     | 0.088 | 1,440                                       | ELXY250E□□821MJ30S |                       | 180      | 10×30              | 0.10                      | 0.25               | 960   | ELXY630E□□181MJ30S |
|                       | 820      | 12.5×20            | 0.046                     | 0.092 | 1,340                                       | ELXY250E□□821MK20S |                       | 220      | 12.5×20            | 0.11                      | 0.28               | 870   | ELXY630E□□221MK20S |
|                       | 1,000    | 12.5×25            | 0.034                     | 0.068 | 1,690                                       | ELXY250E□□102MK25S |                       | 270      | 12.5×25            | 0.074                     | 0.19               | 1,150                                       | ELXY630E□□271MK25S |
|                       | 1,500    | 12.5×30            | 0.030                     | 0.060 | 1,950                                       | ELXY250E□□152MK30S |                       | 330      | 16×20              | 0.085                     | 0.22               | 1,100                                       | ELXY630E□□331ML20S |
|                       | 1,500    | 16×20              | 0.038                     | 0.076 | 1,630                                       | ELXY250E□□152ML20S |                       | 390      | 12.5×30            | 0.068                     | 0.17               | 1,280                                       | ELXY630E□□391MK30S |
|                       | 1,800    | 12.5×35            | 0.024                     | 0.048 | 2,220                                       | ELXY250E□□182MK35S |                       | 470      | 12.5×35            | 0.063                     | 0.16               | 1,390                                       | ELXY630E□□471MK35S |
|                       | 1,800    | 16×25              | 0.028                     | 0.056 | 2,070                                       | ELXY250E□□182ML25S |                       | 470      | 16×25              | 0.055                     | 0.14               | 1,480                                       | ELXY630E□□471ML25S |
|                       | 2,200    | 12.5×40            | 0.022                     | 0.044 | 2,390                                       | ELXY250E□□222MK40S |                       | 560      | 12.5×40            | 0.051                     | 0.13               | 1,530                                       | ELXY630E□□561MK40S |
| 2,700                 | 16×30    | 0.025              | 0.050                     | 2,350 | ELXY250E□□272ML30S                          | 680                | 16×30                 | 0.046    | 0.12               | 1,720                     | ELXY630E□□681ML30S |   |                    |
| 3,300                 | 16×35    | 0.022              | 0.044                     | 2,550 | ELXY250E□□332ML35S                          | 820                | 16×35                 | 0.040    | 0.10               | 1,910                     | ELXY630E□□821ML35S |   |                    |
| 3,900                 | 16×40    | 0.018              | 0.036                     | 2,900 | ELXY250E□□392ML40S                          | 1,000              | 16×40                 | 0.036    | 0.090              | 2,070                     | ELXY630E□□102ML40S |   |                    |

□ □ : Enter the appropriate lead forming or taping code.